

CLAIMS

1. A telephone apparatus, comprising:
a transceiver that communicates with a central station;
a plurality of desksets; and
an interface bus that permits said desksets to communicate with said transceiver.
2. The apparatus of claim 1, wherein said interface bus interface transceiver and said desksets exchange packets over said interface bus, each packet comprising:
an address (ADDR) byte that includes source and destination addresses of the packet;
a command (CMD) byte;
an argument (ARG); and
a block check character (BCC) for error checking.
3. The apparatus of claim 2, wherein said BCC is produced by a longitudinal parity check.
4. The apparatus of claim 2, wherein said BCC is produced by a cyclic redundancy check.
5. The apparatus of claim 2, wherein each packet further comprises a start of header (SOH) byte that indicates the start of the packet.
6. The apparatus of claim 1, wherein said interface bus comprises a pair of conductors.
7. The apparatus of claim 1, wherein said interface bus comprises an unshielded twisted pair.
8. The apparatus of claim 1, wherein said interface bus comprises an EIA-485 interface.

9. The apparatus of claim 1, wherein a media access layer of said interface bus is carrier sense multiple access with collision detect.

10. In a communication system having a plurality of terminals connected to a common node by a digital interface bus, a method for handling error control for packets sent to the terminals by the common node, each packet having modulo-sequential sequence numbers, comprising the steps of:

sending a packet from the common node to one of the terminals; and

sending a negative acknowledgment (NAK) from said one of the terminals to the common node when an error or unexpected sequence number is detected in said packet, wherein said NAK includes the sequence number of the last valid packet received.

11. The method of claim 10, further comprising the step of re-sending any lost packets from the common node to said one of the terminals when an unexpected sequence number is detected.

12. The method of claim 10, further comprising the step of sending a reboot command from the common node to said one of the terminals when the number of missed packets exceeds a predetermined threshold.

13. The method of claim 10, further comprising the step of sending a reboot command from the common node to said one of the terminals when a NAK is received at the common node from said one of the terminals.

14. The method of claim 10, further comprising the steps of:

determining that a packet is new when the sequence number in the current packet is one greater than the sequence number in the previous packet;

determining that a packet is repeated when the sequence number in the current packet equals the sequence number in the previous packet;

determining that a packet is repeated when the sequence number in the current packet is N less than the sequence number in the previous packet, where N is a predetermined threshold; and

detecting a bad sequence number otherwise.

15. The method of claim 10, further comprising the step of detecting an error based on a block check character in said one of the packets.

16. The method of claim 10, further comprising the step of detecting an error when a predetermined period elapses between receipt of successive characters in said one of the packets.